194885

WESTON • SPER
Suite 201, 1090 King Georges Post Road,
Edison, NJ 08837 • (201) 225-6116

TECHNICAL ASSISTANCE TEAM FOR EMERGENCY RESPONSE REMOVAL AND PREVENTION
EPA CONTRACT 68-01-7367

TRANSMITTAL MEMO

TO: Joe Rotola
Response and Prevention Branch, U.S. EPA

FROM: Dilshad Perera
TAT Region II

SUBJECT: Documentation of Transmittal

DATE: 07 December 1989

The purpose of this memo is to transmit the following information:

SITE: Ideal Cooperage

SUBJECT: MMB Reviewed Data
Nine (9) soil for TCLP Metals
Samples Collected 05/02/89

CC: TAT PM Pete Di Pasca
TAT FILE 02-8902-10C

Roy F. Weston, Inc.
SPILL PREVENTION & EMERGENCY RESPONSE DIVISION
In Association with ICF Technology, Inc., C.C. Johnson & Malhotra, P.C., Resource Applications, Inc.,
Geo/Resource Consultants, Inc., and Environmental Toxicology International, Inc.

RECORD OF COMMUNICATION

☐ PHONE CALL ☐ DISCUSSION ☐ FIELD TRIP ☐ CONFERENCE
☐ OTHER (SPECIFY)

(Record of item checked above)

TO:	FROM:	DATE
Frank Messina	Smita Sumbaly	06/12/89
		TIME 12:10a.m.

SUBJECT

CLP Inorganic Data Packages for Quality Assurance Review

SUMMARY OF COMMUNICATION

Attached are the following CLP Inorg/SAS Data Packages to be reviewed for Quality Assurance:

SITE	CASE #/ SAS #	LABORATORY	ANALYSIS/ MATRIX	NUMBER OF SAMPLES	BLANK NUMBER(S)	DUPLICATE NUMBER(S)
Fried Indus. R3/RI/FS	11856	Chemtech	Inorganics Water	18	None	MBL-241-240 MBT-946-947
Ideal Cooperage TAT/Rem.action	4606B	Skinner	~~Water~~ Soil (These Soil samples leached with water samples & convert in to water samples So lab analyzed the samples as water samples.)	09	None	4606B-9A-2

CONCLUSIONS, ACTION TAKEN OR REQUIRED

RECEIVED
SEP 28 1989
S & M BRANCH

INFORMATION COPIES
TO:
File

EPA Form 1300-6 (7-72) REPLACES EPA HQ FORM 5300-3 WHICH MAY BE USED UNTIL SUPPLY IS EXHAUSTED.

A

Title: Evaluation of Metals Data for the Contract Laboratory Program
Appendix A.2: Data Assessment Narrative

Date: Dec. 1988
Number: HW-2
Revision: 8

Case# 4606B Site Ideal Coopsrage Matrix: Soil ✓

Reviewer Melita Lab Skinner Water ____

Contractor ESAT Other ____

A.2.1 All data are of acceptable quality? Yes ____ No X

If no, exceptions are noted below with reason(s) for rejection or qualification as estimated value (J).

9 soil samples were analyzed for RCRA parameters EP Toxicity, Ignitibility, Corrosivity and reactivity tests were done.

According to current EPA action level waste is not reactive - sulfide and cyanide concentrations are <500 mg/kg and <250 mg/kg respectively. Waste is not corrosive - pH ≤2 or ≥12.5 and not ignitable (according to method 1020 SOW 8/86)

In reference to E.P Toxicity method - QA/QC criteria the following analytes are qualified as estimated or rejected.

Spike recovery -

Cr rejected on 4606B 01A-09A because spike recovery %R <30%.

Cd and Pb rejected on 4606B 01A-09A due to high spike recovery. %R >150%.

Title: Evaluation of Metals Data for the Contract Laboratory Program
Appendix A.2: Data Assessment Narrative

Date: Dec. 1988
Number: HW-2
Revision: 8 HS 9/27/89

A.2.1 (continuation)

Ag rejected on 4606B 02, 03, 04, 05, 07, 09 due to high spike recovery %R > 150%.

Se on 4606B 01A - 09A qualified as estimated J because spike recovery fell between 30-74%.

Ba on 4606B 02, 03, 04, 05 qualified as estimated J because spike recovery fell between 126-150%.

Duplicate analysis — Ag on 4606B 01, 06, 08 qualified as estimated J because diff. between sample and dup. > CRDL.

MSA: Ba on 4606B 05 rejected because for MSA corr. of corr(x) r < 0.990.

Ba on 4606B 06, 07, 09 qualified as estimated J because for MSA corr. of corr. r < 0.995.

A.2.2 Contract Problems/Non-compliance

Ref. corrosivity test —

pH of standard or buffer solution was not measured.

QMB Reviewer: _____ Date: _____
Signature

Contractor Reviewer: [signature] Date: 9/21/89
Signature

Verified by: Gale A. Rostert Date: 9/25/89

APPENDIX A 5

SUMMARY OF INORGANICS QUALITY CONTROL DATA

LABORATORY: Skinner CASE NO. 4606B SOW NO. _____ SAMPLE TYPE: leachate-9

SITE/STUDY DESCRIPTION: Ideal Cooperage SAMPLE NOS: 4606B 01A-09A

Field Blank →

FIELD DUP. #'S: 4606B 02-09 LAB DUP. #'S: 4606B-01 MATRIX SPIKE #: 4606B-01

SERIAL DILUTION SAMPLE NO. — COMPLETION DATE: _____ REVIEWERS INITIALS: _____

	XI		I	IIA				IIB		III				IV			V	VI	VII	IX	
Parameter	Detection Limits UG/L CRDL	IDL	Field Blank	Calib. Ver. %R Init	Continued 1	2	3	CRDL Std Ver. %R Init	Fin	Calibration Blanks Init	Continued 1	2	3	PREP BLANK	ICP ICS %R Init	Fin	Matrix Spike	Lab Dup RPD	LCS %R	Ser Dil %D	M e t h
Al	200																				
Sb	60																				
As	10	1.6		98	102	97	96	97		✓	✓	✓	✓	✓			99	24	96		F
Ba	200	5.0		92	94	96	106			✓	✓	✓	✓	✓			140	–	119		F
Be	5																				
Cd	5	0.5		105	104	95	98			✓	✓	✓	✓	✓			197	18	106		F
Ca	5000																				
Cr	10	5.0		108	96	103	108			✓	✓	✓	✓	✓			6.2	22	95		F
Co	50																				
Cu	25																				
Fe	100																				
Pb	5	1.1		95	99	92	96	116		✓	✓	✓	✓	✓			239	15	102		F
Mg	5000																				
Mn	15																				
Hg	0.2	0.2		105	92	106	103			✓	✓	✓	✓	✓			84	–			W
Ni	40																				
K	5000																				
Se	5	1.1		95	100	102	96	96		✓	✓	✓	✓	✓			142	97	91		F
Ag	10	2.0		97	98	102	97			✓	✓	✓	✓	✓			182	80	103		F
Na	5000																				
Tl	10																				
V	50																				
Zn	20																				
CN	10																				

(2) APPENDIX A 5 SUMMARY OF INORGANICS QUALITY CONTROL DATA

LABORATORY: Skinner CASE NO. 4606B SOW NO. _____ SAMPLE TYPE: _____

SITE/STUDY DESCRIPTION: Zebral Coopcrage SAMPLE NOS: _____

Field Blank _____

FIELD DUP. #'S: _____ LAB DUP. #'S: _____ MATRIX SPIKE #: _____

SERIAL DILUTION SAMPLE NO. _____ COMPLETION DATE: _____ REVIEWERS INITIALS: _____

Parameter	XI Detection Limits UG/L CRDL	IDL	I Field Blank	IIA Calib. Ver. %R Init	Continued 1	2	3	IIB CRDL Std Ver. % R Init	Fin	III Calibration Blanks Init	Continued 1	2	3	IV PBL/PEAN	ICP ICS % R Init	Fin	V Matrix Spik	VI Lab Dup RPD	VII LCS % R	IX Ser Dil % D	M e t h
Al	200																				
Sb	60																				
As	10				95						✓										F
Ba	200				96						✓										F
Be	5																				
Cd	5				93						✓										F
Ca	5000																				
Cr	10				104						✓										F
Co	50																				
Cu	25																				
Fe	100																				
Pb	5				93	97		99			✓										F
Mg	5000																				
Mn	15																				
Hg	0.2				103						✓										F
Ni	40																				
K	5000																				
Se	5				92			95			✓										F
Ag	10																				F
Na	5000																				
Tl	10																				
V	50																				
Zn	20																				
CN	10																				

(2) APPENDIX A 5 SUMMARY OF INORGANICS QUALITY CONTROL DATA

LABORATORY: Skinner CASE NO. 4606B SOW NO. _____ SAMPLE TYPE: _____

SITE/STUDY DESCRIPTION: Zidell Cooperage SAMPLE NOS: _____

FIELD DUP. #'S: _____ LAB DUP. #'S: _____ Field Blank _____ MATRIX SPIKE #: _____

SERIAL DILUTION SAMPLE NO. _____ COMPLETION DATE: _____ REVIEWERS INITIALS: _____

	XI		I	IIA				IIB		III				IV		V	VI	VII	IX	
Parameter	Detection Limits UG/L		Field Blank	Calib. Ver. %R				CRDL Std Ver. % R		Calibration Blanks				PB RL EAP N	ICP ICS % R		MS tpix	Lab Dup	LCS	Ser Dil
	CRDL	IDL		Init	Continued 1	2	3	Init	Fin	Init	Continued 1	2	3		Init	Fin	x k	RPD	% R	% D
Al	200																			
Sb	60																			
As	10				105						✓									F
Ba	200				100	100					✓	✓								F
Be	5																			
Cd	5				94	97					✓	✓								F
Ca	5000																			
Cr	10			101	95	106				✓	✓	✓								F
Co	50																			
Cu	25																			
Fe	100																			
Pb	5				92	106					✓	✓								F
Mg	5000																			
Mn	15																			
Hg	0.2																			
Ni	40																			
K	5000																			
Se	5				102						✓									F
Ag	10																			
Na	5000																			
Tl	10																			
V	50																			
Zn	20																			
CN	10																			

(4)

APPENDIX A 5 SUMMARY OF INORGANICS QUALITY CONTROL DATA

LABORATORY: Skinner CASE NO. 4606B SOW NO. _____ SAMPLE TYPE: _____

SITE/STUDY DESCRIPTION: Zigal Cooperage SAMPLE NOS: _____

FIELD DUP. #'S: _____ LAB DUP. #'S: _____ Field Blank _____ MATRIX SPIKE #: _____

SERIAL DILUTION SAMPLE NO. _____ COMPLETION DATE: _____ REVIEWERS INITIALS: _____

Parameter	XI Detection Limits UG/L CRDL	IDL	I Field Blank	IIA Calib. Ver. %R Init	Continued 1	2	3	IIB CRDL Std Ver. % R Init	Fin	III Calibration Blanks Init	Continued 1	2	3	IV PB PREP	IV PB LAN	IV ICP ICS % R Init	IV ICP ICS % R Fin	V MS Matrix	V MS Spik	VI Lab Dup RPD	VII LCS % R	IX Ser Dil % D	IX Ser Dil Hit
Al	200																						
Sb	60																						
As	10																						
Ba	200																						
Be	5																						
Cd	5																						
Ca	5000																						
Cr	10																						
Co	50																						
Cu	25																						
Fe	100																						
Pb	5			97	19					✓	✓												F
Mg	5000																						
Mn	15																						
Hg	0.2																						
Ni	40																						
K	5000																						
Se	5			96	94					✓	✓												
Ag	10																						
Na	5000																						
Tl	10																						
V	50																						
Zn	20																						
CN	10																						

Q. C. Report No. _____

FIELD DUPLICATES

LAB NAME Skinner

DATE _____

CASE NO. 4606B
EPA Sample No. 02A-09A
Lab Sample ID No. _____
Units ug/L

Matrix _____

Compound	~~Control Limit~~[1] reject	Sample(S)	Duplicate(D)	RPD[2]
Metals:				
1. Aluminum				
2. Antimony				
3. Arsenic	±10	15.2	12.2	<CRDL
4. Barium	±500	720.0	500.0 U	>CRDL
5. Beryllium				
6. Cadmium	±5	4.0 B	9.3 B	>CRDL
7. Calcium				
8. Chromium		5.0 U	5.0 B	—
9. Cobalt				
10. Copper				
11. Iron				
12. Lead	50%	39.5	85.1	73.2
13. Magnesium				
14. Manganese				
15. Mercury		0.2 U	0.2 U	—
16. Nickel				
17. Potassium				
18. Selenium	±5	1.2 B	4.0 B	<CRDL
19. Silver	±10	33.2	45.9	>CRDL
20. Sodium				
21. Thallium				
22. Vanadium				
23. Zinc				
Others:				
Cyanide				

* Out of Control

1 To be added at a later date.

2 RPD = {|S - D|/((S + D)/2)} x 100

NC - Non calculable RPD due to value(s) less than CRDL

TEST \ SAMPLE #	1	2	3	4	5	6	7	8	9
As	5.3	15.2	27.4	1.9	3.6	18.7	19.9	<1.6	12.2
Ba	<500	1720	3840	1570	<500	<500	<500	560	<500
Cd	14.4	4.0	16.8	18.4	7.1	22.3	17.5	3.0	9.3
Cr	13.1	<5.0	16.8	5.1	5.2	6.8	10.0	<5.0	5.0
Pb	47.4	39.5	1010	192	161	828	94.4	12.1	85.1
Hg	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2	<0.2
Se	3.8	1.2	<1.1	1.4	<1.1	<1.1	<1.1	<1.1	4.0
Ag	<20	33.2	65.0	66.6	48.6	<20	37.8	<20	45.9
pH	6.9	7.2	7.6	7.2	7.8	8.1	7.8	5.8	7.2
IGNIT	>200	>200	>200	>200	>200	>200	>200	>200	>200
H_2S	<25	<25	<25	<25	<25	<25	<25	<25	<25
CN	<1	<1	<1	<1	<1	<1	<1	<1	<1

METALS IN UG/L
pH IN UNITS
IGNITABILITY IN °F
REACTIVITY IN mg/kg

SKIDMORE & THERMAN
SAS 4606-B

TMA
Thermo Analytical Inc.

Skinner & Sherman Laboratories Inc.
300 Second Avenue
Post Office Box 521
Waltham, MA 02254-0521
(617) 890-7200

95

Ideal coverage
TAT/Rem. action

RECEIVED
MAY 23 1989
S & M BRANCH

Federal Express Airbill #2689432885

22 May 1989

United Stated Environmental Protection Agency
Contract Laboratory Program (CLP)
Sample Management Office (SMO)
300 North Lee Street
Alexandria, VA 22313

Attention: Linda Boynton

Dear Ms. Boynton:

Enclosed is the Sample Data Package for the Inorganic Analyses of SAS #4606-B. The sample were analyzed under Skinner and Sherman Work Order #8905056.

Please feel free to call if there are any questions concerning the enclosed.

Sincerely,

SKINNER AND SHERMAN LABORATORIES

RW RP-cd

Richard Purdy
Contract Laboratory Program
Program Manager

encl.

RP/cd

cc: Data Audit Staff, EMSL-LV, Federal #2689432896
Richard Spear, USEPA Region II, Federal #2689432900

U.S. EPA - CLP

RECEIVED
MAY 23 1989

COVER PAGE - INORGANIC ANALYSES DATA PACKAGE

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

SOW No.: 7/87

EPA Sample No.	Lab Sample ID.
01A	05056-01S
01AD	05056-01S2
01AS	05056-01DS
02A	05056-02S
03A	05056-03S
04A	05056-04S
05A	05056-05S
06A	05056-06S
07A	05056-07S
08A	05056-08S
09A	05056-09S
09AD	05056-09S2
09AS	05056-09DS
EXBLK	05056-11S
EXDUP	05056-10S

Were ICP interelement corrections applied? Yes/No YES

Were ICP background corrections applied? Yes/No YES
If yes-were raw data generated before application of background corrections? Yes/No NO

Comments:
THIS IS AN EP TOXICITY AND RCRA CHARACTERIZATION SAS CASE. A SUMMARY OF THE RESULTS AND THE RCRA CHARACTERISTICS CAN BE FOUND FOLLOWING FORM XI

Release of the data contained in this hardcopy data package and in the computer-readable data submitted on floppy diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Lab Manager: [signature]

Date: 22 May 89

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-01S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	5.30	B	S	F
7440-39-3	Barium	500.00	U	NS	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~14.40~~		NS	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~13.10~~		NS	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~47.40~~		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	3.80	B	NSJ	F
7440-22-4	Silver	20.00	U	N*SJ	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT

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1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

02A

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-02S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	15.20		S	F
7440-39-3	Barium	1720.00		NS J	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~4.00~~	~~B~~	N+	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~5.00~~	~~U~~	NS	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~39.50~~		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.20	B	NS J	F
7440-22-4	Silver	~~33.20~~		N*S	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-03S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	27.40		S	F
7440-39-3	Barium	3840.00		NS J	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~16.00~~		NS	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~114.00~~		N+	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~1010.00~~		N+	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.10	U	N+ J	F
7440-22-4	Silver	~~65.00~~		N*S	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

04A

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-04S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	1.90	B	S	F
7440-39-3	Barium	1570.00		NS J	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~18.40~~		N+	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~5.10~~	~~B~~	NS	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~192.00~~		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.40	B	N+ J	F
7440-22-4	Silver	~~66.60~~		N*S	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT

U.S. EPA - CLP

1

INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

06A

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-06S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	18.70		S	F
7440-39-3	Barium	500.00	U	N+ J	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~22.30~~		N+	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~6.80~~	B	NS	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~828.00~~		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.10	U	NS J	F
7440-22-4	Silver	20.00	U	N*S J	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

07A

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-07S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	19.90		S	F
7440-39-3	Barium	500.00	U	N+ J	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~17.50+~~		NS	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~18.00+~~		NS	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~94.40+~~		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.10	U	NS J	F
7440-22-4	Silver	~~37.80+~~		N*S	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

08A

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-08S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	1.60	U	S	F
7440-39-3	Barium	560.00		NS J	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~5.00~~	~~B~~	NS	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~5.00~~	~~U~~	~~N+~~	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~12.10~~		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.10	U	N+ J	F
7440-22-4	Silver	20.00	U	N*S J	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

09A

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-09S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	12.20		S	F
7440-39-3	Barium	500.00	U	N+ J	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	~~9.30~~	~~B~~	N+	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	~~5.00~~	~~B~~	NS	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	~~85.10~~		N+	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	4.00	B	N+ J	F
7440-22-4	Silver	~~45.90~~		N*S	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXBLK

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-11S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	1.60	U	S	F
7440-39-3	Barium	500.00	U	NS	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	1.00	U	NS	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U	NS	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	8.90		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.10	U	NS	F
7440-22-4	Silver	20.00	U	N*S	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

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INORGANIC ANALYSIS DATA SHEET

EPA SAMPLE NO.

EXDUP

Lab Name: SKINNER & SHERMAN LABS. Contract: 68-W8-0006

Lab Code: SKINER Case No.: SAS No.: 4606B SDG No.: 01A

Matrix (soil/water): WATER Lab Sample ID: 05056-10S

Level (low/med): LOW Date Received: 05/03/89

% Solids: 0.0

Concentration Units (ug/L or mg/Kg dry weight): UG/L

CAS No.	Analyte	Concentration	C	Q	M
7429-90-5	Aluminum				NR
7440-36-0	Antimony				NR
7440-38-2	Arsenic	13.00		S	F
7440-39-3	Barium	980.00		N+	F
7440-41-7	Beryllium				NR
7440-41-7	Cadmium	8.10	B	NS	F
7440-70-2	Calcium				NR
7440-47-3	Chromium	5.00	U	N+	F
7440-48-4	Cobalt				NR
7440-50-8	Copper				NR
7439-89-6	Iron				NR
7439-92-1	Lead	37.10		NS	F
7439-95-4	Magnesium				NR
7439-96-5	Manganese				NR
7439-97-6	Mercury	0.20	U		CV
7440-02-0	Nickel				NR
7440-09-7	Potassium				NR
7782-49-2	Selenium	1.10	U	NS	F
7440-22-4	Silver	93.10		N*S	F
7440-23-5	Sodium				NR
7440-28-0	Thallium				NR
7440-62-2	Vanadium				NR
7440-66-6	Zinc				NR
	Cyanide				NR

Color Before: COLORLESS Clarity Before: CLEAR Texture:

Color After: COLORLESS Clarity After: CLEAR Artifacts:

Comments:

EP TOX EXTRACT DUPLICATE OF SAMPLE 01A